

REMARKS

This Second Response to the Office Action dated August 21, 2008 is filed in place of the response to the Office Action electronically filed on February 19, 2009. Please reconsider the claims pending in the application for reasons discussed below.

Claim Rejections - 35 U.S.C. § 103

The Examiner rejected claims 1-15, 17-28, 30-34 and 38 under 35 U.S.C. § 103(a) as being unpatentable over Henning (US 5,609,178) and McDonald (U.S. 4,936,397). In response, Applicant has amended independent claims 1, 22 and 38. Additionally, Applicant respectfully traverses claim 32.

The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to place the flow restriction of McDonald above or below the valve of Henning. According to the Examiner, this would be done to have greater control over the fluid pressure within the bore. Applicant respectfully submits that the Examiner is mistaken. The valve of McDonald is designed for use with a pneumatic motor operation earth drilling tool, and the configuration of the valve is specific to this use. Accordingly, it would not have been obvious to one of ordinary skill in the art at the time in the invention was made to place the valve of McDonald above or below the valve of Henning, which is solely intended for use with liquid as the operation fluid (see Henning, for example, col. 2, lines 37-41,"the bypass may be opened by increasing and then reducing the hydrostatic pressure of the fluid....")

As such, it would not have been obvious to combine the teachings of McDonald and Henning as the valve of McDonald is specifically designed for use with air as the working fluid, whereas the valve of Henning is specifically designed for use with a liquid as the working fluid.

Additionally, as amended, claims 1, 22 and 38 include the limitation of a variable flow restriction that is adapted to create a pressure differential and the resulting force utilized to actuate the valve arrangement. The Examiner does not appear to have proposed a modification of Hennig and McDonald that includes all the limitations of claims 1, 22 and 38.

However, it is observed by Applicant that replacing the valve arrangement of Hennig with the arrangement of McDonald would destroy the intended function of Hennig. At col. 2, lines 33- 37, Hennig states:

“Where the valve body is open to flow, the bypass opening may be cycled between open and closed positions by simply increasing the flow rate of fluid through the valve body and then reducing the flow rate to allow the spring to shift the sleeve to the bypass open or closed position”.

The valve arrangement of McDonald would not permit this operation. The valve arrangement of McDonald is arranged to move directly from a closed position, with no flow, to a fully open position (see McDonald, col 7, lines 44 – 51). Therefore, it is not possible to flow through the valve of McDonald at a lower flow rate and then increase the flow rate to move the valve to a different position, as would be required to provide a flow rate actuated bypass valve, as required by Hennig.

As the foregoing illustrates, the combination of Henning and McDonald fails to render the claims obvious. Therefore, Applicant respectfully requests the 103(a) rejection be removed and allowance of the same.

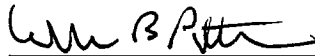
Allowable Subject Matter

The Examiner objected to claims 16, 29 and 35 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 16, 29 and 35 depend from claims 1, 22, and 32, respectively, and therefore are allowable for at least the same reasons as claims 1, 22, and 32.

Conclusion

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully requests that the claims be allowed.

Respectfully submitted,



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